

PHOTOGRAPHY

FAQ

Q What is clipping and how can I avoid it?

A Our eyes can see very bright and very dark objects, but not necessarily at the same time. Cameras have the same problem. They can adjust their exposure settings to capture more or less light, but there are limits to the range of intensities they can measure in a single exposure. In a high-contrast scene such as direct sunlight with strong reflections and shadows, the brightest and darkest parts of the image are too extreme for the camera to measure at the same time. As a result, these areas end up as solid areas of black and white, known as clipping.

Some cameras include a contrast control that reduces the problem a little, but often the only remedy is to adjust the exposure compensation to reduce highlight clipping at the expense of increased lowlight clipping, or vice versa.

Ben Pitt

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SONY Cyber-shot DSC-T100

★★★★★

£245 inc VAT

Now that £100 cameras take excellent pictures (see our Labs review on page 88 for details), why would anyone consider spending £250 on a compact camera? It's a question we often struggle to answer, but Sony's latest ultra-compact T-series model offers some compelling arguments.

First, it's possibly the best-looking camera we have ever seen, with its gentle curves, enormous 3in screen and brushed-aluminium finish in a choice of black, silver or red. Next, it has some impressive specifications, including a 5x zoom with optical image stabilisation and a maximum ISO speed of 3200. The 3in screen has practical as well as aesthetic advantages, although its 230,000-pixel resolution is no more than those of many 2½in screens. Big screens use more power, but battery life remains decent at 428 shots. One feature we haven't seen before is high-definition output to HD TVs, although it's for photos only – it can't record HD video – and the proprietary component cable you'll need is a £30 optional extra.

We're delighted to see that Sony has finally fixed two annoying traits we have moaned about for many months. One is that the T100 has a Delete All option – in other Sony cameras it's necessary to format the card or delete it using a card reader. The other is that the continuous mode carries on indefinitely rather than taking just four or five shots. It's fast, too, capturing two frames per second (fps) for the first 26 shots, and then slowing to around 1.5fps when our memory card created a bottleneck. Performance in other areas is just as impressive, and the menu layout is fast and efficient.



We expect fantastic image quality from a £245 camera, and in most of our tests the T100 didn't disappoint, with sumptuous colours and well-balanced exposures in tricky lighting conditions. Detail was often as good as that of Olympus's 10-megapixel E-410 (opposite), although the T100's higher noise (and subsequent noise-reduction processing) reduced detail in low-light shots. ISO 400 gave passable results, but ISO 800 was questionable, and higher settings were useful only at lower resolutions. Still, with optical image stabilisation, high ISO speeds were necessary less often than with other cameras, as longer shutter speeds were possible without blur. Macro photography was amazing, with the lens focusing on subjects just

1cm away. However, our biggest concern is that sunlit shots often suffered from lens reflections and blooming, two separate problems that both resulted in fog-like patches in pictures.

The T100 is great fun to use, and if it cost £50 less we might be more forgiving about its image quality niggles. Fujifilm's F40fd isn't as fast or as stylish and its lens is a non-stabilised 3x zoom model, but it takes better pictures and costs around £80 less.

Ben Pitt

SUMMARY

- ✓ Stunning design
- ✓ Fast performance
- ✗ You pay for style as much as substance

DIGITAL CAMERA 8.0 megapixels (3,264x2,448), 5x zoom lens (35-175mm), Memory Stick Pro Duo slot (31MB internal), Li-ion battery
PART CODE DSC-T100S
SUPPLIER www.7dayshop.com
DETAILS www.sony.co.uk

PERFORMANCE (see page 58)

Battery life 428 shots

-50% Reference +50% +100%

Also consider...

PANASONIC Lumix DMC-TZ2

★★★★★

£222 inc VAT



It may look like a standard compact digital camera, but Panasonic's Lumix DMC-TZ2 takes an enormous 10x zoom lens. The lens enables you to take both wide-angle and close-up shots, providing a great deal of versatility in composition. With built-in optical image stabilisation, the TZ2 is the best travelling companion we've seen.



DIGITAL CAMERA 6 megapixels (2,816x2,112), 10x optical zoom (28-280mm), SDHC slot (13MB internal), Li-ion battery
PART CODE DMC-TZ2EB-S
SUPPLIER www.dabs.com
DETAILS www.panasonic.co.uk
✓ Big zoom; fast performance
✗ No manual controls
FULL REVIEW Aug 2007

Battery life 368 shots

-50% Reference +50% +100%

CANON EOS 400D

★★★★★

£445 inc VAT



The successor to the hugely popular EOS 350D, Canon's EOS 400D is the best affordable digital SLR camera on the market. Incredibly fast focusing, a high capture rate and brilliant image quality from the 10.1-megapixel sensor all make it really hard not to love this camera. For photography enthusiasts who want to upgrade from a film SLR or compact camera, this is undoubtedly the model to get.



DIGITAL CAMERA 10.1 megapixels (3,888x2,592), 3x optical zoom (18-55mm), CompactFlash slot, Li-ion battery
PART CODE 1237 B009AA
SUPPLIER www.onestop-digital.com
DETAILS www.canon.co.uk
✓ Fantastic image quality
✗ Finite continuous mode
FULL REVIEW Feb 2007

Battery life 505 shots

-50% Reference +50% +100%

OLYMPUS

E-410 with 14-42mm lens

★★★★

£500 inc VAT

Olympus's latest entry-level digital SLR is different to its competitors for a number of reasons. The most obvious is its size. SLR cameras are never exactly pocketable, but at 375g the E-410 is much lighter than usual and looks petite next to other digital SLRs. This is partly down to the Four Thirds design, which uses a smaller sensor and shorter lenses than other digital SLR cameras. The downside is that the small handgrip isn't as comfortable to hold as those of the camera's competitors, but not to the extent that it's a serious problem.

The E-410 is also unusual for a digital SLR in its ability to display a live preview on its LCD screen – a feature that we first saw on the Olympus E-330 but have never seen since. This time, Olympus has made the most of live previews with a histogram display and instant feedback for white balance and exposure settings on the preview image. However, it's disappointing that the screen doesn't tilt to allow shooting at awkward angles.

The zoom ring on the supplied lens has a smooth, manageable travel, but the focus ring has an overly long 360 degrees of rotation and doesn't stop at either end to confirm that you've reached its limits. Combined with the relatively small optical viewfinder, manual focusing is cumbersome and a little imprecise. We actually found it

easier to focus using the LCD screen and a momentary 7x digital zoom. This is certainly a welcome feature, but it's bewildering that the optical viewfinder is of limited use on a digital SLR camera.

There aren't an enormous number of buttons and dials, but the camera is reasonably quick and easy to use. When it's not showing a live preview, the screen displays either the 10 most commonly used settings or a pretty exhaustive set of 18, and the five-way navigation pad provides quick access to any of these. The command dial is a faster means of making large changes to settings, although the number of clicks doesn't always relate to the amount of change, and when turning it quickly it struggles to keep up.

A dust filter in front of the sensor vibrates as you switch the camera on, but you don't have to wait for it to finish, as pressing any button overrides it. Auto-focus is fast, and continuous shooting runs at 3fps for around nine shots at

the top JPEG quality setting, at which point the memory card slows things down – considerably when using xD cards, although a fast CompactFlash card kept going at a reasonable 1fps, or 2.3fps when using the second-from-top JPEG compression quality setting. Battery life is excellent at 693 shots in our test.

Our image-quality tests revealed excellent colours, with automatic white

balance that tended to produce warm skin tones without being flattering to the point of inaccuracy. Highlights were clipped more than we would like, though (see the FAQ, left, for more details). We had to look hard to see any noise at ISO 400, and ISO 1600 proved perfectly usable for when conditions demanded it, although not to the standard of Canon's EOS 400D (see 'Also consider...', below left). However, the auto-focus was less reliable than those of the other cameras on test this month. Even when the lens focused correctly, we found that detail was distinctly soft. The fact that it was worse at higher ISO speeds suggested that noise reduction was to blame and, sure enough, switching the noise reduction off gave us the sharp detail we expect from a 10-megapixel digital SLR. Noise was still unobtrusive at ISO 400 and even at ISO 800 in some shots, but we had to keep a tight grip on camera settings to get the best image quality from the E-410.

Despite our grumbles, we enjoyed using the E-410 and were pleased with the pictures it produced. However, Canon's EOS 400D is a largely similar camera without the live preview, but also without as many minor flaws.

Ben Pitt



SUMMARY

- ✓ Digital SLR with live preview
- ✗ Overexposed highlights
- ✗ Problems with auto and manual focus

DIGITAL SLR CAMERA 10.0 megapixels (3,648x2,736), 3x zoom lens (28-84mm), Four Thirds lens mount, xD and CompactFlash slots, Li-ion battery
 PART CODE OLYE410SLK
 SUPPLIER www.jessops.com
 DETAILS www.olympus.co.uk

PERFORMANCE (see page 58)

PANASONIC
Lumix DMC-FZ50★★★★★ PRICE CUT!
£269 inc VAT

BEST BUY Panasonic's Lumix DMC-FZ50 gives almost digital SLR performance on a much lower budget. The huge 12x optical stabilised zoom lens and 10-megapixel CCD allow you to get close to the action. Image quality is excellent at low ISO settings, but ISO 400 or higher produces grainy images. It's the best super-zoom digital camera on the market.



DIGITAL CAMERA 10 megapixels (3,648x2,736), 12x optical zoom (35-420mm), SD slot (32MB card supplied), Li-ion battery

PART CODE PANLUMFZ50
 SUPPLIER www.fotosense.co.uk
 DETAILS www.panasonic.co.uk

- ✓ Fantastic handling; beautiful pictures in well-lit conditions
- ✗ Image quality slumps as ISO setting rises

FULL REVIEW Jan 2007

FUJIFILM
FinePix S6500fd Zoom★★★★★
£180 inc VAT

BEST BUY The S6500fd's zoom lens starts at 28mm for wide-angle photography, while a face-detection system helps you to focus and expose portraits of up to 10 people. High colour accuracy and detail make for excellent pictures, while low-light photography is excellent. This is an astounding camera for the price.



DIGITAL CAMERA 6.1 megapixels (2,848x2,136 pixels), 11x optical zoom, 10MB internal memory, xD slot, 4x AA (alkalines supplied) batteries

PART CODE N077950A
 SUPPLIER www.jessops.com
 DETAILS www.fujifilm.co.uk

- ✓ Fantastic image quality
- ✓ Very low noise at ISO 800

FULL REVIEW Mar 2007

CANON
PowerShot A630★★★★★
£130 inc VAT

Canon's PowerShot A630 is the first inexpensive camera we've seen to offer full photographic controls. It has a 4x zoom, 8-megapixel sensor and a full set of manual focus, exposure and priority modes.

The camera is easy to use, fast and has excellent image quality. The high quality and versatility are extraordinary at this price.



DIGITAL CAMERA 8.0 megapixels (3,264x2,448), 4x optical zoom (35-140mm), SDHC slot (16MB supplied), 4x AA batteries

PART CODE 12888007AA
 SUPPLIER www.buyacamera.co.uk

- ✓ Excellent image quality; full manual control
- ✗ Bulky

FULL REVIEW Jun 2007



CASIO Exilim Hi-Zoom EX-V7

★★★★★
£200 inc VAT

Last month we praised Panasonic's TZ2 for its 10x zoom lens in a body barely bigger than that of the average 3x zoom compact camera (see 'Also consider...', page 30). Casio's EX-V7 lens has a 7x zoom, but at 26mm thick and 149g the camera borders on the ultra-compact category. As with the TZ2, the maximum aperture is smaller than usual at f/3.4, which means less light hitting the CCD and, as a result, darker, grainier or blurrier pictures depending on how you choose to resolve the issue.

Optical image stabilisation is built in to tackle blur from camera shake. This is a particularly useful feature in high-zoom cameras, and one that goes some way to counteracting the aperture issue. It didn't seem as effective as similar features in Canon, Panasonic and Sony cameras, though. The mode dial includes aperture priority, shutter priority and manual exposure – a rarity in compact cameras. However, manual exposure is a little unwieldy, with the ISO speed defaulting to 64 and limited feedback as to how exposures will come out.



The EX-V7's video mode is one of the best we have seen, with AVC (MPEG4) widescreen capture at 848x480 pixels, stereo sound at CD specifications and a working optical zoom. Still image quality tests revealed reliable colours in a wide range of conditions, despite a tendency towards under-saturation, and reasonably low noise at ISO 400. Other 7-megapixel cameras

manage sharper detail and more flattering colours, but nothing here gave us serious cause for concern.

As we went to press the silver EX-V7 cost up to £250, but the black version is considerably better value at £200. We would prefer the TZ2's superior image quality and even larger zoom, but the EX-V7's ultra-compact design and fantastic video mode make it worth consideration.

Ben Pitt

SUMMARY

- ✓ 7x zoom lens in an ultra-compact camera
- ✓ Excellent video mode
- ✗ Unexceptional image quality

DIGITAL CAMERA 7.1 megapixels (3,072x2,304), 7x zoom lens (39-266mm), SDHC slot (12MB internal), Li-ion battery
PART CODE N078970A
SUPPLIER www.play.com
DETAILS www.casio.co.uk

PERFORMANCE (see page 58)



FUJIFILM FinePix Z5fd

★★★★★
£125 inc VAT

It's not quite as stunning as Sony's T100 (see page 30), but the Z5fd is nevertheless a stylish gadget with its ultra-slim design, 2½in 230,000-pixel screen and glowing logo on the front of the camera. The standard silver finish looks great but we love the Raspberry and Mocha Brown finishes even more.

The camera has some smart features that are well signposted to help users find them. Face detection has a dedicated button, along with the obligatory animated onscreen squares to show it in action. Another button cycles between automatic mode, a high-sensitivity mode (sensibly labelled anti-blur) and Natural and Flash. The latter shoots with and without the flash in quick succession, allowing you to choose the best picture later. The remaining options are standard for a compact camera, although we're disappointed that there are no metering options. Performance could be better at 2.3 seconds between shots, and the continuous mode is no faster. Using the flash doesn't slow the camera down but browsing shots stored on an xD card is particularly slow. Sadly,



Fujifilm's recent trend for combination xD/SD slots isn't continued here. The slim design also means a slim battery, and its 282-shot life is disappointing.

Our image-quality tests revealed Fujifilm's usual knack for superb colours on automatic settings, with vibrant, natural tones and excellent handling of highlights in high-contrast scenes. However, the automatic settings were too ready to jump to high ISO speeds, even in fairly bright

conditions. This led to significant noise-reduction artefacts, smearing fine detail and creating jagged edges to straight lines. These pictures still looked excellent when viewed onscreen or printed at standard sizes, but they didn't stand up to close inspection.

There are few ultra-compact cameras available at this price, but Sony's DSC-W35 (see *Labs*, page 88) is a better example and costs less.

Ben Pitt

SUMMARY

- ✓ Slim design
- ✓ Excellent colours
- ✗ Mediocre performance

DIGITAL CAMERA 6.1 megapixels (2,848x2,136), 3x zoom lens (36-108mm), xD slot (26MB internal), Li-ion battery
PART CODE N078970A
SUPPLIER www.pcwb.com
DETAILS www.fujifilm.co.uk

PERFORMANCE (see page 58)



CHOOSING A... Compact Digital Camera

Follow the steps to find your ideal specs

RESOLUTION: 4 megapixels
ZOOM: 3x optical (35-105mm)
MONITORING: 1.8in, 85,000-pixel LCD screen
SUPPLIED MEMORY: 10MB internal
BATTERIES: 2x AA disposable
 Recommended minimum in grey

1 A digital camera with the specifications shown in grey will suit those who want to take pictures to view on their PC and create 7x5in prints. It should cost around £80, but there may be hidden downsides such as slow performance and very basic user controls.

2 Spend more and you'll get a higher resolution. An 8-megapixel sensor has the potential to produce sharp prints up to A4 size, but only if it and the lens are suitably high quality. There are 10-megapixel compact cameras available, but we've yet to see one that's significantly better than 8-megapixel models. Most people don't print enlargements so a 6-megapixel sensor is sufficient.

3 A 3x zoom lens gives reasonable scope for framing your shots, but a larger range can do wonders for your photographic skills. Some compact cameras manage a 6x zoom while a few go as far as 10x. However, big zooms need optical image stabilisation to avoid blur at extreme settings. Alternatively, consider a wide-angle lens, denoted by a 28mm or lower minimum focal length.

4 Big LCD screens are a treat to use but they don't always offer sharper detail. A 2½in screen is common even in the budget market, but only the best have resolutions of 200,000 or more pixels.

5 Consider hidden costs: budget £20 for a 1GB memory card, as the bundled memory will never be enough. If your chosen camera doesn't have rechargeable batteries, budget an extra £15 to buy a set.

6 Don't forget that specifications tell you very little about image quality; you'll need to read our reviews for that. In a compact camera, we believe that the user shouldn't have to grapple with complicated controls to get great images in all lighting conditions.